(19) World Intellectual Property Organization

International Bureau





(43) International Publication Date 20 October 2005 (20.10.2005)

PCT

(10) International Publication Number WO 2005/097871 A1

- (51) International Patent Classification⁷: C08L 5/08, A61K 47/36
- C08J 3/075,
- (21) International Application Number:

PCT/EP2004/002988

- (22) International Filing Date: 22 March 2004 (22.03.2004)
- (25) Filing Language:

English

(26) Publication Language:

English

- (71) Applicant (for all designated States except US): UNIVER-SITE DE GENEVE [CH/CH]; 24, rue du Général Dufour, CH-1211 Genève 4 (CH).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): BERGER, Jérôme [CH/CH]; Impasse de Fagne B, CH-1145 Bière (CH). GURNY, Robert [CH/CH]; 7, rue Calvin, CH-1204 Genève (CH). REIST, OECHSLIN, Marianne [CH/CH]; Chemin des Esserts 3b, CH-1024 Ecublens (CH).

- (74) Agents: PAUTEX, SCHNEIDER, Nicole et al.; c/o Novagraaf International S.A., 25, avenue du Pailly, CH-1220 Les Avanchets, Genève (CH).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR,

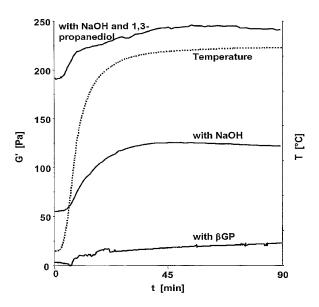
[Continued on next page]

The composition disclosed is a

(54) Title: PSEUDO-THERMOSETTING NEUTRALIZED CHITOSAN COMPOSITION FORMING A HYDROGEL AND A PROCESS FOR PRODUCING THE SAME

(57) Abstract:

Elastic modulus (G') of three hydrogels as a function of time when temperature increases from 4 to 37°C.



phosphate-free transparent hydrogel at a temperature higher than 5°C. Said composition contains a homogeneously reacetylated chitosan derived from a chitosan having a deacetylation degree of 80 - 90 %, having a molecular weight of not smaller than 200 kDa and a deacetylation degree of 30 - 60 %, and may further contain a diol. Said composition may be used as a drug delivery system.

pseudo-thermosetting neutralized chitosan composition,

neutralized with an hydroxylated base, forming a

"With NaOH" refers to the hydrogel obtained in Example 6

"With NaOH and 1,3-propanediol": refers to hydrogel obtained in Example 7

"With β-GP": refers to comparative hydrogel obtained in Example 10 (Comparative)



WO 2005/097871 A1



GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

— of inventorship (Rule 4.17(iv)) for US only

Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.